IN THE CLAIMS:

The following is a current listing of claims and will replace all prior versions and listings of claims in the application. Please amend the claims as follows:

1. (Currently Amended) A ~~generic protocol~~ translator device ~~that translates information from a source device to a destination device~~, comprising:

one or more processors; and

a memory storing program instructions executable by the one or more processors to cause the translator device to implement:

a receiver circuit manager ~~that further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, said receiver circuit manager~~ configured to receive[[s]] information transmitted from a source device using a source format, wherein the received information ~~that~~ is intended for a destination device ~~through said interface sockets~~;

~~one or more receivers that receive information from said receiver circuit manager;~~

~~one or more~~ a message converter[[s]] ~~that~~ configured to convert the received information to ~~the~~ a destination format, ~~that uses a conversion process, said message converters~~ wherein said converting includes using poly-dimensional finite state machine, and wherein the message converter ~~are extensible and can be reprogrammed in the field~~ is configured to support converting the received information using at least one other format ~~protocols, device types, and applications~~; and

~~a message router that determines which destination protocol is appropriate for the information; and~~

~~one or more~~ a message sender[[s]] ~~that~~ configured to transfer the converted information to the destination device using ~~in~~ the destination format ~~and protocol to the destination device~~.

2. (Currently Amended) The translator device of claim 1, wherein the message converter is further configured to determine the destination format based at least one of: the destination device, a destination protocol corresponding to the destination device, and a destination application corresponding to the destination device.

~~A system with a generic protocol translator that translates information from a source device to a destination device, comprising:~~

~~a receiver circuit manager that further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, said receiver circuit manager receives information from a source device that is intended for a destination device through said interface sockets;~~

~~one or more receivers that receive information from said receiver circuit manager;~~

~~one or more message converters that convert the information to the destination format that uses a conversion process, said message converters are extensible and can be reprogrammed in the field to support other protocols, device types, and applications;~~

~~a message router that determines which destination protocol is appropriate for the information; and~~

~~one or more message senders that transfer the information in the destination format and protocol to the destination device.~~

3. (Currently Amended) The translator device of claim 1, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and at least one subsequent stage, wherein each stage of said multi-stage pipeline is configured to determine a result as a function of one or more input variables, and wherein said one or more input variables of each of said at least one subsequent stage includes the determined result from a prior stage of the multi-stage pipeline.

~~A method to make generic protocol translator that translates information from a source device to a destination device, comprising:~~

~~providing a receiver circuit manager that further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, said receiver circuit manager receives information from a source device that is intended for a destination device through said interface sockets;~~

~~providing one or more receivers that receive information from said receiver circuit manager;~~

~~providing one or more message converters that convert the information to the destination format that uses a conversion process, said message converters are extensible and can be reprogrammed in the field to support other protocols, device types, and applications;~~

~~providing a message router that determines which destination protocol is appropriate for the information; and~~

~~providing one or more message senders that transfer the information in the destination format and protocol to the destination device.~~

4. (Currently Amended) A method ~~that translates information from a source device to a destination device using a generic protocol translator~~, comprising:

a translator device receiving information ~~with a receiver circuit manager~~ transmitted from a source device using a source protocol, wherein the received information is intended for a destination device[[,]]; ~~said receiver circuit manager further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, receiving information with one or more receivers that receive information from said receiver circuit manager;~~

the translator device determining a destination protocol corresponding to the destination device;

the translator device converting the received information ~~with one or more message converters that convert the information~~ to the destination ~~format~~ protocol, wherein said converting includes using a poly-dimensional finite state machine; and ~~that uses a conversion process, said message converters are extensible and can be reprogrammed in the field to support other protocols, device types, and applications;~~

~~routing information with a message router that determines which destination protocol is appropriate for the information; and~~

the translator device sending the converted information ~~with one or more message senders that transfer the information in~~ to the destination device using the destination ~~format and~~ protocol ~~to the destination device~~.

5. (Canceled)

6. (Currently Amended) ~~A dependent claim according to claims 1, 2, 3, 4, or 5~~ The method of claim 4, wherein ~~said conversion process uses a poly dimensional~~ the finite state machine ~~automaton that further comprises~~ includes a multi-stage pipeline comprising a first stage and ~~a plurality of~~ at least one subsequent stage[[s]], wherein each stage of said multi-stage pipeline ~~further comprises a matrix wherein~~ is configured to determine a result ~~is obtained~~ as a function of one or more input variables, and wherein said one ~~of said~~ or more input variables of each of said at least one subsequent stage ~~further comprises~~ included the determined result from a prior stage of the multi-stage pipeline.

7. (Currently Amended) An article of manufacture including a computer-readable memory medium having instructions stored thereon that, if executed by a device, cause the device to perform a method comprising:

receiving information transmitted from a source device using a source format, wherein the received information is intended for a destination device;

determining a destination format corresponding to the destination device;

converting the received information to the destination format, wherein said converting includes using poly-dimensional finite state machine; and

sending the converted information to the destination device using the destination format. ~~A generic protocol translator that translates information from a source device to a destination device, comprising:~~

~~a receiver circuit manager that further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, said receiver circuit manager receives information from a source device that is intended for a destination device through said interface sockets;~~

~~one or more receivers that receive information from said receiver circuit manager;~~

~~one or more message converters that convert the information to the destination format that uses a conversion process, said message converters are extensible and can be reprogrammed in the field to support other protocols, device types, and applications, wherein said conversion process uses a poly dimensional finite state automaton that further comprises a multi-stage pipeline comprising a first stage and a plurality of subsequent stages, wherein each stage of said multi-stage pipeline further comprises a matrix wherein a result is obtained as a function of one or more input variables, wherein one of said input variables of each said subsequent stage further comprises the result from a prior stage;~~

~~a message router that determines which destination protocol is appropriate~~

8. (Currently Amended) The article of manufacture of claim 7, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and at least one subsequent stage, wherein each stage of said multi-stage pipeline is configured to determine a result as a function of one or more input variables, and wherein said one or more input variables of each of said at least one subsequent stage included the determined result from a prior stage of the multi-stage pipeline.

~~A system with a generic protocol translator that translates information from a source device to a destination device, comprising:~~

~~a receiver circuit manager that further comprises one or more interface sockets, each interface socket is assigned a supported source protocol, said receiver circuit manager receives information from a source device that is intended for a destination device through said interface sockets;~~

~~one or more receivers that receive information from said receiver circuit manager;~~

~~one or more message converters that convert the information to the destination format that uses a conversion process, said message converters are extensible and can be reprogrammed in the field to support other protocols, device types, and applications, wherein said conversion process uses a poly dimensional finite state automaton that further comprises a multi stage pipeline comprising a first stage and a plurality of subsequent stages, wherein each stage of said multi stage pipeline further comprises a matrix wherein a result is obtained as a function of one or more input variables, wherein one of said input variables of each said subsequent stage further comprises the result from a prior stage;~~

~~a message router that determines which destination protocol is appropriate for the information;~~

~~and one or more message senders that transfer the information in the destination format and protocol to the destination device.~~

9-11. (Canceled)

12. (Currently Amended) A method, comprising:

a communication device receiving an input message transmitted using a source communication protocol, wherein the input message has a source data format;

the communication device generating an output message from the received input message, wherein the output message has a destination data format and is to be transmitted using a destination communication protocol;

wherein said generating includes using a multi-stage, [[multi]] poly-dimensional finite state machine to:

convert the source communication protocol of the input message to the destination communication protocol of the output message; and

convert the source data format to the destination data format of the output message;

wherein inputs to various stages of the finite state machine include inputs indicative of the source data format, the source communication protocol, the destination data format, and the destination communication protocol.

13. (Currently Amended) The method of claim 12, the finite state machine having a first stage and one or more additional stages, wherein each of the stages generates an output from two or more inputs to that stage using a [[multi]]poly-dimensional matrix, and wherein each of the one or more additional stages includes the previous stage's output as an input;

14. (Previously Presented) The method of claim 12, further comprising determining, from the input message, the source communication protocol and source data format.

15. (Previously Presented) The method of claim 12, wherein the inputs to various stages of the finite state machine further include one or more of the following inputs: 1) inputs indicative of a) the type of source application that originated the input message and b) the type of destination application to which the output message is directed; 2) inputs indicative of a) the type of a first device from which the input message originated and b) the type of a second device to which the output message is directed; 3) input indicative of a current connection status between the first and second devices, and 4) input indicative of the current state of the finite state machine.

16. (Previously Presented) The method of claim 12, wherein inputs to one or more stages of the finite state machine include one or more reserved inputs, the method further comprising using at least one of the reserved inputs to update the operation of the finite state machine.

17. (Previously Presented) The method of claim 15, wherein inputs to one or more stages of the finite state machine include one or more reserved inputs, the method further comprising using at least one of the reserved inputs to update the operation of the finite state machine.

18. (Previously Presented) The method of claim 12, wherein the one or more additional stages include a final stage having an output specifying 1) a current action to be taken in order to generated the output message, and 2) a next state of said finite state machine.

19. (Currently Amended) The method of claim 12, ~~wherein said receiving and generating are performed by a first device~~ the method further comprising sending the output message to a second device using the destination data format and the destination communication protocol, both of which are supported by the second device.

20. (Currently Amended) An apparatus, comprising:

one or more processors; and

a memory storing program instructions executable by the one or more processors to cause the apparatus to:

receive an input message; and

perform data format conversion and protocol conversion of the input message to generate an output message using a multi-stage, ~~multi~~ poly-dimensional finite state machine having at least one stage that has at least two inputs.

21. (Previously Presented) The apparatus of claim 20, wherein at least a portion of the memory is reprogrammable to update operation of the finite state machine, wherein the input message originates from the apparatus, and wherein the apparatus is configured to convey the output message to a separate apparatus.

22. (Previously Presented) The apparatus of claim 21, wherein the finite state machine includes one or more reserved inputs, and wherein the reserved inputs are usable, via reprogramming of the memory, to update operation of the finite state machine to accommodate a future communication protocol and/or data format.

23. (Previously Presented) The apparatus of claim 20, wherein inputs to various stages of the finite state machine include inputs indicative of a communication protocol of the input message, a data format of the input message, a communication protocol of the output message, and a data format of the output message;

and wherein the inputs to various stage of the finite state machine further include one or more of the following inputs: 1) inputs indicative of a) the type of source application that originated the input message and b) the type of destination application to which the output message is directed; 2) inputs indicative of a) the type of a first device from which the input message originated and b) the type of a second device to which the output message is directed; 3) input indicative of a current connection status between the first and second devices, and 4) input indicative of the current state of the finite state machine.

24. (Currently Amended) The apparatus of claim 20, further comprising:

a plurality of sender units configured to transmit the output message;

a message router ~~coupled~~ configured to receive the output message and ~~configured~~ to determine one of the plurality of sender units to send the output message according to a desired communication protocol for the output message.

25. (Previously Presented) The apparatus of claim 21, wherein the apparatus is a portable wireless device, and wherein the input message originates from a separate apparatus.

26. (Currently Amended) An apparatus, comprising:

a logic unit configured to implement a message converter having a ~~first~~ finite state machine, and

wherein the ~~first~~ finite state machine is ~~multi-stage,~~ a ~~multi~~ poly-dimensional state machine that performs data format and protocol conversion on an input message having a first data format and a first communication protocol to produce an output message having a second data format and a second communication protocol.

27. (Currently Amended) The apparatus of claim 26, further comprising a memory having stored therein ~~storing~~ values used to implement the ~~first~~ finite state machine, wherein the memory is reprogrammable to update the stored values used to implement the ~~first~~ finite state machine, altering operation of the message converter.

28. (Previously Presented) The apparatus of claim 26, wherein the apparatus is a portable device, wherein the apparatus is configured to use the message converter to communicate with a plurality of devices that do not have a corresponding message converter, and wherein the logic unit is an FPGA or an ASIC.

29. (Currently Amended) The apparatus of claim 26, wherein the finite state machine is a multi-stage finite state machine;

wherein inputs to various stages of the ~~first~~ finite state machine include inputs indicative of a first communication protocol of the input message, a first data format of the input message, a second communication protocol of the output message, and a second data format of the output message;

and wherein the inputs to various stage of the ~~first~~ finite state machine further include one or more of the following inputs: 1) inputs indicative of first and second application types for a first application originating the input message and a second application for which the output message is destined, respectively; 2) inputs indicative of a first device type and a second device type for a first device that originated the input message and a second device for which the output message is destined, respectively, 3) input indicative of a current connection status between the first and second devices; and 4) input indicative of a current state of the finite state machine.

30. (Previously Presented) The apparatus of claim 26, wherein the logic unit is further configured to recognize a communication protocol and a data format associated with the input message, wherein the input message is received from another apparatus.

31. (Currently Amended) An apparatus, comprising:

~~an input/output unit configured to perform~~ first means for communicati[[on]]ing with devices external to the apparatus.

~~first~~ second means for performing protocol and data format translation using a multi-stage, poly-dimensional finite state machine on an input message to produce an output message.

32. (Currently Amended) The apparatus of claim 31, wherein the apparatus is a portable wireless device, and wherein the ~~first~~ second means includes a reprogrammable memory.

33. (Currently Amended) The apparatus of claim 31, wherein the ~~first~~ second means includes one or more reserved inputs for use in accommodating future communication protocols and/or data formats.

34. (Currently Amended) One or more computer readable memory media ~~storing program~~ having stored thereon instructions that, if execut[[able]]ed by a computing device, cause the computing device to implement a multi-stage, ~~multi~~ poly-dimensional finite state machine for converting an input message to an output message, including converting a first communication protocol of the input message to a second communication protocol for the output message, and further including converting a first data format of the input message to a second data format of the output message.

35. (Currently Amended) The computer readable memory media of claim 34, wherein the media stores program instructions executable by the computing device to receive the input message wirelessly or transmit the output message wirelessly.

36. (Currently Amended) The computer readable memory media of claim 34, wherein inputs to various stages of the finite state machine include inputs indicative of the first and second communication protocols and inputs indicative of the first and second data formats;

and wherein the inputs to various stage of the finite state machine further include one or more of the following inputs: 1) inputs indicative of first and second application types for a first application originating the input message and a second application for which the output message is destined, respectively; 2) inputs indicative of a first device type and a second device type for a first device that originated the input message and a second device for which the output message is destined, respectively, 3) input indicative of a current connection status between the first and second devices; and 4) input indicative of a current state of the finite state machine.